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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,507	05/01/2001	Arzhang Ardavan	117-342	8750

23117 7590 12/20/2004

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EXAMINER	
SOUW, BERNARD E	

ART UNIT	PAPER NUMBER
2881	

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.

EXAMINER

ART UNIT	PAPER
1206	

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

SUPPLEMENTAL OFFICE ACTION

1. Regarding the last Office action mailed on 11/30/2004, the following corrective action is taken.

The period for reply of 3 MONTHS set in said Office Action is restarted to begin with the mailing date of this letter.

2. On page 45, lines 10-12, after "*04/14/2004 interview*", delete the entire sentence:

[The derivation of Eq.6a,b, and its asymptotic behavior shown in Fig.6 unambiguously and coherently prove the correctness of the examiner's position, in full agreement with the general knowledge in the art].

3. Still on page 45, line 14, after "*Rayleigh distance has been*" and prior to "*contradicted by the facts*", delete ***[also]***.

4. The eliminations above do not have any impact on the validity of the examiner's response to applicant's argument recited in that particular section (i.e., section 40, regarding Rayleigh or Fresnel range).

5. A corrected copy of the entire page 45 of the last Office Action is enclosed.

Communications

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

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December 6, 2004

beams) do not (rigorously) "decay at a rate of $1/R^{2}$", but do so only asymptotically, i.e., at a distance $z \rightarrow \infty$, or at least for z >>(much greater than) z_R. That in the far field a laser beam also decays spherically is already well known even to undergraduate students. But that is only true if the distance is measured from the beam waist, as discussed previously (see [Melles'Griot] and/or [Souw'Handbook]). If the distance is measured from the collimating optics, the decay behavior has non-spherical components up to many multiples of the Rayleigh range (see previous §112/¶.1 rejections of claims 28, 66, 72, 79, 80, and further 60, 61, 72).

As a matter of fact, the examiner has tried to explain these circumstances already during the 04/14/2004 interview. ~~The derivation of Eq.6a,b, and its asymptotic behavior shown in Fig.6 unambiguously and coherently prove the correctness of the examiner's position, in full agreement with the general knowledge in the art.~~ Applicant's position regarding the alleged disappearance of any interference effect for distances larger than the Rayleigh distance has been ~~also~~ contradicted by the facts taken from phased array beam steering as known in optical and microwave space communications. Specifically, applicant's contention that "*every interference effect vanishes for distances larger than the Rayleigh distance*", as expressed during the 04/14/2004 interview, is just the opposite of the knowledge in the art based on Huygens-Fresnel diffraction theory, which states that for observation points at distances larger than the Rayleigh distance (Eq.2) all wavelets originating from source points over the entire emitting surface contribute by way of interference to the total intensity measured at that observation